ABSTRACT

Disclosed is a method for fabricating planar light waveguide circuits, wherein the circuit has a structure that includes a substrate comprised of a core and under-clad layers, an optical circuit, and a plurality of arrayed waveguides coupled thereon. More specifically, the method includes the steps of layering a hard layer on the core layer for forming a mask pattern of the planar light waveguide circuit; forming the mask pattern on the hard layer; layering a photoresist layer on a branch of the optical circuit and the arrayed waveguides of the mask pattern; forming a vertical taper structure on the photoresist layer using a gray scale mask; and, etching the core layer using the photoresist layer with the vertical taper structure and the mask pattern.